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September 30, 2015

**VIA ELECTRONIC MAIL AND UPS OVERNIGHT**

Mr. Robert Stein, Chairman  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**Re: Petition No. 1181; Petition of SolarCity Corporation for a Declaratory Ruling for the Location and Construction of an Approximately 4.93 Megawatt Solar Electric Generating Facility on 9 Stott Avenue and 292 Plain Hill Road, Norwich, Connecticut -- Additional Information on Electric Storage**

Dear Chairman Stein:

In response to Connecticut Siting Council ("Council") staff questions during the September 22 site visit, attached are sixteen (16) copies of a document describing the contemplated on-site energy storage system.

Please contact me at 860-509-6575 with any questions or if you need additional information.

Very truly yours,

BROWN RUDNICK LLP

By:  

Philip M. Small  
Counsel for SolarCity Corporation

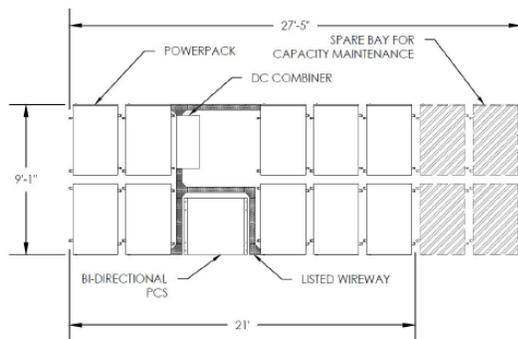
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Enclosures

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## Norwich Public Utilities Energy Storage System – Stott Avenue, Norwich, CT

### Equipment

The Energy Storage System (“ESS”) to be installed on the Stott Avenue property will consist of approximately (34) 100kWh Tesla commercial Powerpacks, (3) 250kW bidirectional inverters, and associated thermal and communications components. Additional Powerpacks will be added over the system’s life to ensure that energy capacity is maintained. The underlying technology embodied in the stationary ESS is the same lithium-ion battery used in Tesla’s Model S vehicle, albeit for grid-tied applications. Tesla’s lithium-ion batteries are the power source for over 50,000 Tesla vehicles on the road, which have completed over 650 million miles of driving, and received the best safety rating of any vehicle ever tested by the National Highway Transportation Safety Administration in 2013. The left layout below shows a Tesla ESS system, 1/3<sup>rd</sup> the size of what is proposed at CMEEC. The right image below shows a Tesla ESS system, ~1/6<sup>th</sup> the size of what is proposed at Stott Ave.



### Installation Process

Installation of the self-contained ESS components is straightforward, comparable to installing commercial AC switchgear. During the installation of the solar PV system, SolarCity will build a concrete pad for the ESS. The Tesla battery packs come pre-assembled with thermal conditioning and communication hardware. Towards the end of the solar PV system’s construction, the battery packs and inverters will be delivered to the site and placed on the pad. These components will be wired together, and subsequently connected to a bus shared by the PV system. Once the entire solar and battery system is built, inspected, and approved for interconnection, the combined system will be electrified and begin operating.

### ESS Operation

The battery system will be used to provide energy to the NPU grid during periods of maximum electrical demand. Utilities are subject to ‘capacity tags’ which memorialize each system’s electrical consumption during the periods of maximum electrical demand for New England as a whole. Although peak periods only last for a few hours each year, consumption during these brief periods incurs costs throughout the entire year. By discharging electricity from the ESS during these peak hours, the system will not only provide electricity savings for NPU ratepayers year round, but the system also benefits the New England grid as a whole by providing additional clean, reliable peak capacity, precisely when the grid is under the greatest stress. During other periods of the year, NPU may also cycle the battery to provide benefits to the local distribution system, including protection from high spot market energy costs and as supplemental power if other units are temporarily out-of-service.